

# iGate Prime 7 4G - Advanced GSM Switch



106-885  
iGate Prime 4G

\* ALWAYS TEST THE UNIT ON SITE BEFORE INSTALLATION TO AVOID RE-STOCKING FEE

## SIM Preparation

1

A Nano sized active SIM card is required (not included). This product requires a regular voice and SMS SIM card, a data-only SIM will not work.

## Site Wiring

2

**iGate Enclosure**  
(Install at height to allow the internal antenna to find signal.)

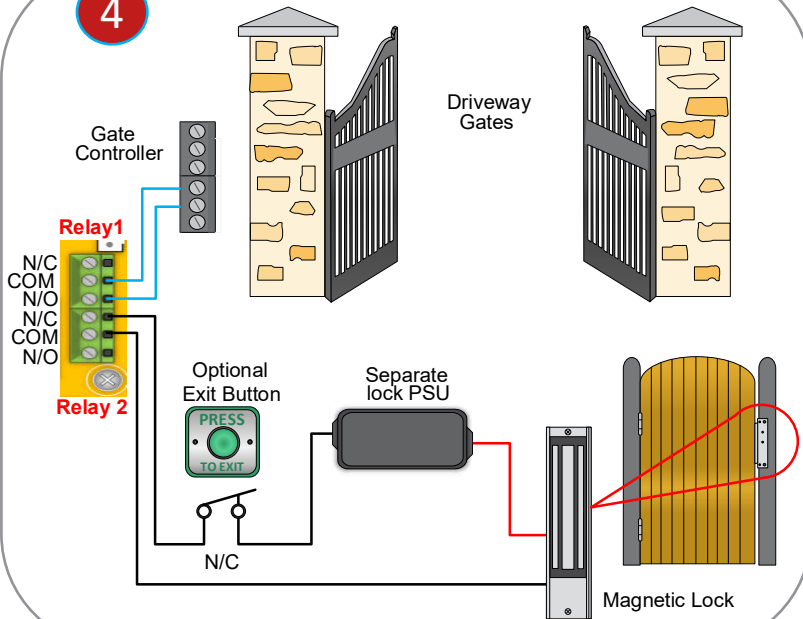
**DC Power Cable**  
(1.0mm<sup>2</sup> – 8m MAX)

Keep PSU as close to the unit as possible & Do not share PSU with other devices.

**Note:** PSU not supplied.  
Can be purchased separately. 24v DC 1.2A peak.

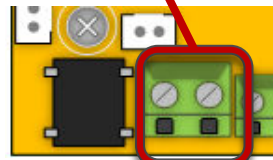
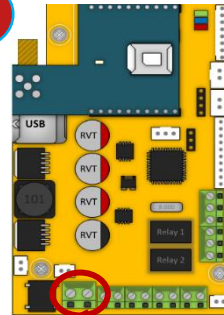
## Relay Connections

4



## Power

3



**12-24V DC input**  
(Polarity Protected)

## SITE SURVEY



Please read this entire manual before installing this product. A full comprehensive manual is available on our website for additional information.



Ensure there is good 4G signal on site. 4G units will fall back to 3G service in some countries.



Set up on a bench in workshop **BEFORE** going to site. Program the unit in the comfort of your work bench and call technical support should you have any questions.



This product requires a regular voice & SMS SIM card. **Do not use a data only SIM, as this will not work in the unit.**

## POWER CABLE

KEEP POWER SUPPLY AS CLOSE AS POSSIBLE.

**TIP:** Most technical calls received are due to installers using CAT5 or alarm cable to power the unit.

**NEITHER** are rated to carry enough power! ( 1.2amp peak )

*Please use the following cable:*

- Up to 2 metres ( 6 feet ) – Use minimum 0.5mm<sup>2</sup> ( 18 gauge )
- Up to 4 metres ( 12 feet ) – Use minimum 0.75mm<sup>2</sup> ( 16 gauge )
- Up to 8 metres ( 24 feet ) – Use minimum 1.0mm<sup>2</sup> ( 14 gauge )

**Power Consumption:**  
Standby = 80mA  
Peak = 1.2A

## INGRESS PROTECTION



We recommend sealing all entry holes for prevention of insects that can cause issues with a risk of shorting out components.



To maintain the IP55 rating please follow the sealing instructions included. (also available online)



LIGHTNING PRONE AREAS **MUST** USE SURGE PROTECTION FOR POWER SUPPLY!

See overleaf for more PCB details

Turn Over



# iGate Prime 4G

- Advanced GSM Switch

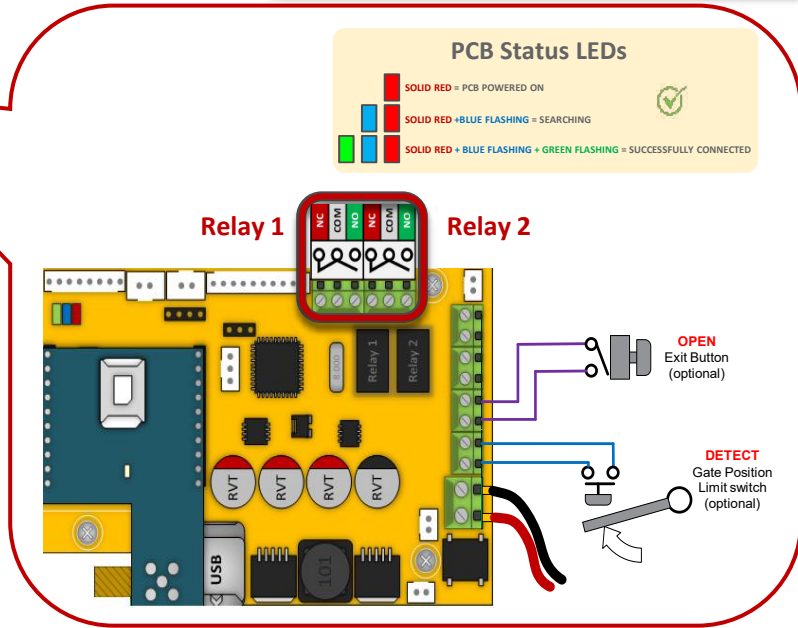


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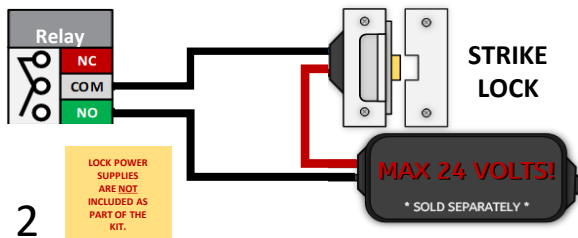
## Wiring Connections

**Tip:** All main connections are pre-wired. Below are optional wiring additions for 3<sup>rd</sup> party controllers.

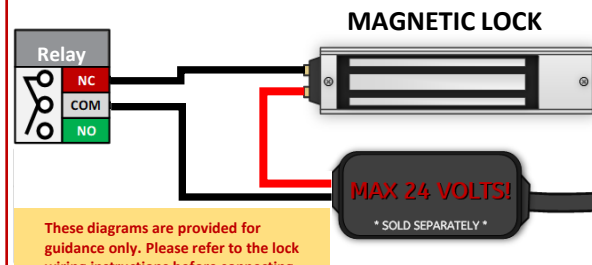


**Note:** The supplied enclosure is fully sealed. You will need to drill a hole in the wall of the enclosure then secure each half of the supplied cable gland into place to ensure the waterproof seal is intact. (ensure you do not drill the hole larger than the gland supplied)

### ALTERNATIVE WIRING EXAMPLE



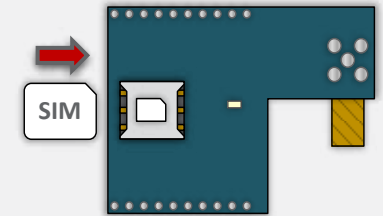
### ALTERNATIVE WIRING EXAMPLE



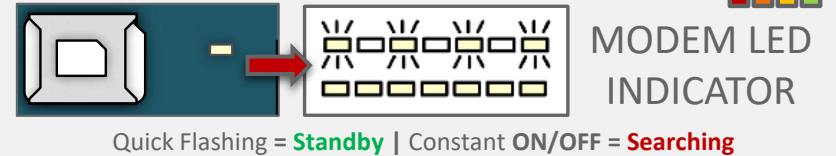
These diagrams are provided for guidance only. Please refer to the lock wiring instructions before connecting.

## SIM ORIENTATION

**ALWAYS** ensure the system is switched **OFF** when adding or removing your SIM card and ensure the orientation is correct.



## CONNECTION TO NETWORK



## CHANGE APN (for VoLTE / 4G services)

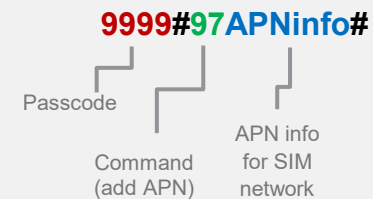
The correct APN must be set for correct operation.

Check with your network provider for the correct APN for 4G data. Once you have confirmed the APN enter it in place of 'APNinfo' in an SMS to the intercom.

## via SMS

Ensure the PCB is powered on and connected to the network with a GREEN flashing LED.

Then send the below text as an SMS to the intercom Sim number. A power reboot is required after the 'OK' reply message is received back.



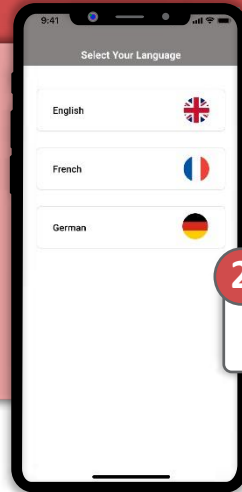
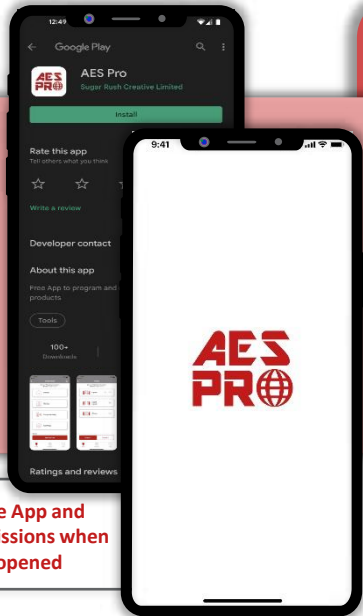
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## Getting Started

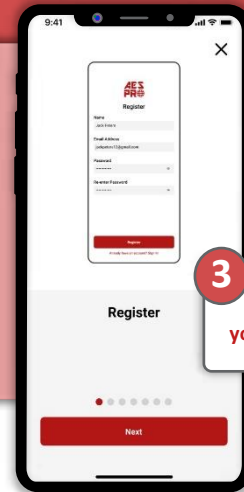


AES PRO App

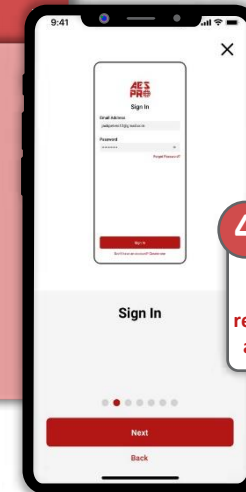
**1** Download the App and Accept all permissions when the app is opened



**2** Choose your language



**3** Register your details

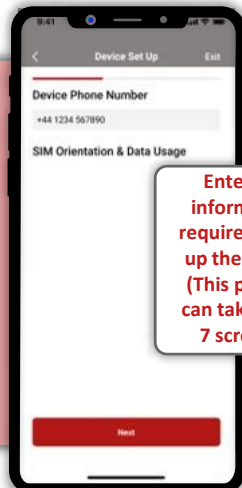


**4** Sign in using previously registered email and password

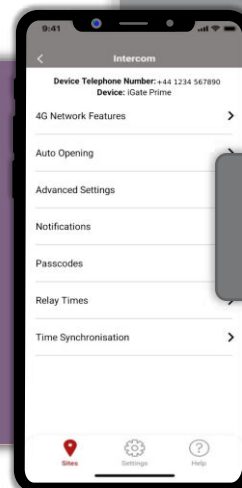
## Device Setup



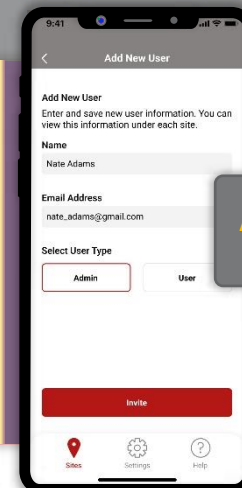
Choose your device from the list provided



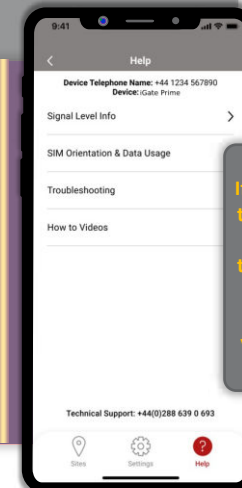
Enter the information required to set up the device (This process can take up to 7 screens)



Customise Advanced Features (more on this on pg4)



Add additional app users



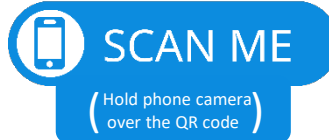
If you are having trouble the help section has troubleshooting and How to Videos to help you resolve the problem

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## Advanced Programming Setup



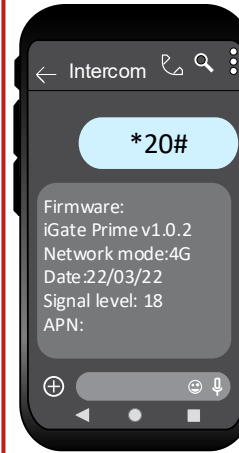
See our YouTube Channel  
for full app walkthrough



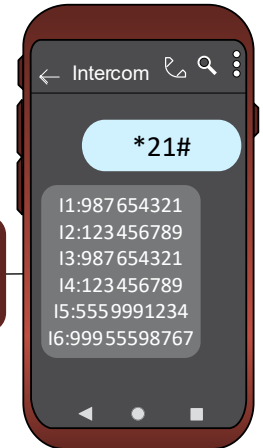
or search  
"AES Global"

**Note:** You need to send the SMS message created by the app to the intercom SIM number and receive the 'OK' reply for correct programming.

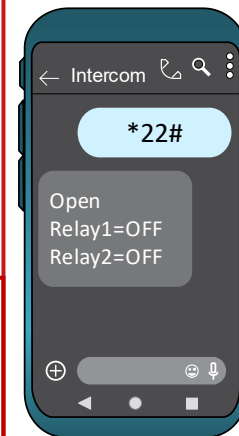
## INFORMATION (SMS Reply Examples)



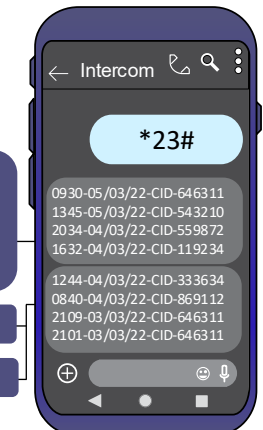
**SIGNAL STRENGTH**  
Will reply with signal range 1-31. Min signal level should be 10 on 4G systems



**STORED NUMBERS**  
I=Dial IN Caller ID number.  
N = Another message to follow  
E = End of messages



**RELAY STATUS**  
OPEN - Shows status of the input terminals called  
DETECT - Can be used with a limit switch. Relay status shown to check if any relay is latched.



**ACTIVITY LOG**  
Use this to see who used the intercom and when. Which pin codes were used, who used caller ID, who answered the call.  
**Tip:** Time and date is in international military format.

Last 6 digits of caller ID user phone number

Last 2 digits of keypad code used

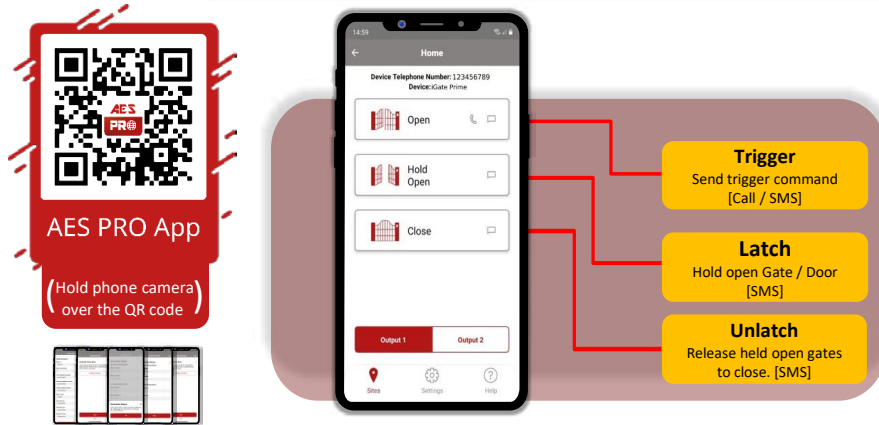
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## Using App for End User to Manage Gates



### Basic SMS Strings to Manage Gates

OPERATION	SMS STRING						
<b>OPERATE RELAYS</b> Trigger, Latch or Unlatch relays by SMS X = Relay Function <table border="1" style="width: 100%;"> <tr> <td>1 = Trigger relay 1</td> <td>4 = Trigger relay 2</td> </tr> <tr> <td>2 = Latch relay 1</td> <td>5 = Latch relay 2</td> </tr> <tr> <td>3 = Unlatch relay 1</td> <td>6 = Unlatch relay 2</td> </tr> </table>	1 = Trigger relay 1	4 = Trigger relay 2	2 = Latch relay 1	5 = Latch relay 2	3 = Unlatch relay 1	6 = Unlatch relay 2	1234#X#
1 = Trigger relay 1	4 = Trigger relay 2						
2 = Latch relay 1	5 = Latch relay 2						
3 = Unlatch relay 1	6 = Unlatch relay 2						
<b>CHECK STATUS</b> (min signal level required for full operation is 10)	*20#						
<b>CHECK STORED NUMBERS</b> I = Dial in number. N = Another message. E = End of messages.	*21#						
<b>CHECK RELAY STATUS</b>	*22#						
<b>EVENTS LOG</b> (Check last 20 events, most recent first) CID = caller ID used	*23#						
<b>ADD CALLER ID NUMBER</b> (max 250) (14 digits maximum)	9999#72number#						
<b>CHANGE RELAY TIME</b> Time = 1-9999 seconds	9999#50time#						
<b>FACTORY RESET (DEFAULT EVERYTHING)</b>	9999#999#						

Default User Code: 1234  
Default Installer Code: 9999

### SWITCH MAINTENANCE

Bug ingress is a common issue in unit failures. Ensure that all components are sealed accordingly and check occasionally. (Do not open the panel in the rain / snow unless correctly equipped to keep the internals dry. Ensure the unit is securely closed after maintenance)

### SIM MAINTENANCE

If using a pre-paid casual SIM card it will need topped up occasionally. It is recommended to advise the home owner / end user to register the SIM card on the provider's web site if available. Most major networks allow registration of card payment details for an auto top up feature, which means they will automatically top up your intercom when the balance runs low or in some cases, they offer a low balance reminder to be sent if they do not wish the auto top up feature.

### ENVIRONMENTAL INFORMATION

The equipment that you bought has required the extraction and use of natural resources for its production. It may contain hazardous substances for the environment. In order to avoid the dissemination of those substances in our environment and to diminish the pressure on the natural resources, we encourage you to use the appropriate take-back systems. Those systems will reuse or recycle most of the materials of your end-of-life equipment.



The crossed-bin symbol marked in your device invites you to use those systems.

If you need more information on the collection, reuse and recycling systems, please contact your local or regional waste administration. You can also contact AES Global Ltd for more information on the environmental performances of our products.

### WARRANTY

Please note, by installing this product, you are accepting the following warranty terms:

- The manufacturer's warranty is a "return to base" 2 year warranty from date of manufacture. This means that any suspected defective components or items are returned to the manufacturer's agent for investigation and diagnosis and returned at the cost of the customer.
- The warranty does not cover, nor is the manufacturer or agent responsible for any of the following whatsoever: Storm damage, lightning or surge damage, flooding, accidental damage, vandalism or deliberate damage, unexplained corrosion or unusually harsh environments, failure of telephone networks, future un-interoperability between the product and network providers which cause malfunction due to changes implemented by the phone providers after manufacture of the product, or that which is outside of control of the manufacturer (e.g. 2G, 3G switch off, removal or inability to obtain VOLTE service), and damage due to inaccurate installation.
- The manufacturer in no way accepts liability for any of the following incurred due to a product defect: Cost of attending site, inconveniences, labor rates, time lost, loss to or damage to property, security breaches, late payment clauses or breaches of any contracts between the installer and the client.
- This is a professional install product only. The product is a component of an overall system. Therefore, it is the responsibility of the installer to certify the safety and compliance of the overall finished system. As soon as this product is fixed to another item, or connected to another third-party device, then the product has been modified, and compliance with local regulations in the country of install is strictly the responsibility of the installer.
- Re-stocking fees may apply to items returned that are found to be non-defective. Complete units will also attract a re-stocking fee if returned for credit, regardless if a defect is discovered or not. Re-stocking fees may vary depending on the condition of the item being returned, and whether it can be determined as in brand new condition. The warranty terms do not entitle customers to an automatic full refund. For more details on returns procedures and re-stocking fees, contact the agent.

6. Items with physical signs of surge damage are not covered by warranty. Items with visible signs of surge damage will only be covered by warranty if photographic evidence is provided from site, showing surge protection has been installed.

Full warranty terms and conditions available upon request to AES Technical Department.

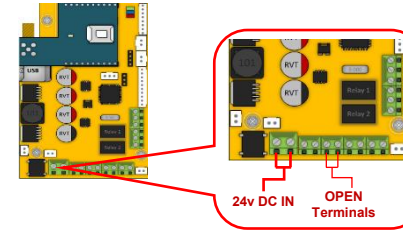


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## TROUBLESHOOTING

Symptoms caused	Problem/error	Solution
No LEDs on.	The unit will not power up.	Check power supply voltage at intercom is 23.4v DC or more. Cable length from PSU to intercom should be less than 8 meters and in 1.0mm2 cable for this distance. See cable guide on page 1 of this manual. Check the fuse.
No green CPU light	The unit powers up but is not showing network reception or will not respond to SMS.	<p>This means the unit is not able to detect the network for some reason.</p> <ul style="list-style-type: none"> <li>-Power off the unit, remove the SIM and check it in a mobile phone to verify it can make a call and has calling credit if it is a Pay As You Go SIM.</li> <li>-Disable any PIN code request if active on the SIM card.</li> <li>-Check the SIM is a standard voice capable SIM. If you are unsure, contact your SIM card provider to verify.</li> <li>-Check the reception is medium or good. Poor reception is not sufficient.</li> <li>-Change to an external antenna.</li> </ul> <p><b>External Antenna Details</b></p> <ul style="list-style-type: none"> <li>-Ensure the cable does not have too many sharp bends.</li> <li>-Check the height of the antenna and make sure it is not inside a metal enclosure.</li> <li>-Check correct power cable size for cable length from PSU. Refer to manual for guidelines</li> </ul>
The caller ID function does not work.	Incorrect programming or poor signal	<p>If your number is a private or number withheld, then it will not work.</p> <ul style="list-style-type: none"> <li>-Ensure the number is programmed as you would normally dial it from another phone.</li> <li>- Ensure you have adequate GSM signal at the intercom by sending *20# as a text.</li> </ul>

## Reset / Default Unit



- 1) Power off the unit. (approx 60 secs)
- 2) Make a link across the terminals marked OPEN.
- 3) Switch on power
- 4) Wait 20 seconds.
- 5) The unit will then clear memory and be defaulted
- 6) Remove the link and wait around 20 seconds.

**Note:** Performing this process will remove all current programming including saved users & access codes.



Manufacturer: Advanced Electronic Solutions Global Ltd  
Address: Unit 4C, Kilcronagh Business Park, Cookstown, Co Tyrone, BT809HJ, UK

Complies with the following essential requirements for 2014/53/EU:  
 ETSI draft EN 301 489-1 V2.1.1 (2017-02) (Electromagnetic compatibility)  
 ETSI draft EN 301 489-52 (2016-11) (Electromagnetic compatibility, specific to cellular)(2G bands 900/1800, 3G band 1,8 LTE bands 1, 3, 7, 8, 20).  
 Test report number LCS181101028AEB  
 ETSI EN 301 511 V12.5.1 (2017-03) (3.2 of directive 2014/53/EU)  
 ETSI TS 151 010-1 V12.8.0 (2016-05) (Digital cellular telecoms compliance)  
 Test report number LCS181101028AEB  
 ETSI EN 301 908-1 V11.1.1 (2016-07) (IMT Cellular networks, 3.2 of directive 2014/53/EU)  
 ETSI EN 301 908-2 V11.1.2 (2016-07) (CDMA spread / UTRA FDD)  
 Test report number LCS181101028AEC  
 ETSI EN 301 908-13 V11.1.2 (2017-07) (E-UTRA and UE standards)  
 Test report number LCS181101028AED  
 EN 62311 :2008 (Electromagnetic safety and human exposure)  
 Test report number: LCS181101028AEE  
 EN 60950-1, (A1, A11, A12, A2)  
 EN 62311  
 IEC 60950 (IT equipment safety)  
 Test report number: LCS181101029AS

**CE**  
2280

The notified body is: Micom Labs (CAB number 2280).  
 This declaration is issued under the sole responsibility of the manufacturer.  
 Signed by:

Paul Creighton, Managing Director. Date: 4th Dec 2018

*This product is not a complete product until fully installed. It is therefore considered a component part of an overall system. The installer is responsible to check that the end installation complies with local regulatory requirements. This equipment forms part of a "fixed installation".*